

Patent claims

1. An aqueous amino resin composition comprising amino
resins **A**, formaldehyde-binding additives
(auxiliaries) **B**, which if desired comprise
hydroxyl-containing polyurethanes **B13**, if desired,
acrylic resins **C** in the form of aqueous
dispersions, and water, with the proviso that the
presence of at least one of the components **B13** and
C in the composition is mandatory where the
component **B** consists only of at least one organic
hydroxyl compound which is soluble in water or a
monohydric alcohol having 1 to 4 carbon atoms and
is selected from dihydric, trihydric and
pentahydric alcohols containing up to 6 carbon
atoms, pentaerythritol and sorbitol,
monosaccharides containing up to 6 carbon atoms,
disaccharides containing up to 12 carbon atoms,
polysaccharides having an Ostwald viscosity of up
to 200 mPa·s at 25°C and a concentration
corresponding to 37% refraction, monohydric and
polyhydric aromatic alcohols containing only one
benzene ring, and monohydric and polyhydric
phenols, and of at least one amide which is soluble
in water where a monohydric alcohol having 1 to 4
carbon atoms and is selected from aliphatic amides
containing up to 6 carbon atoms and aromatic amides
containing only one benzene ring.
2. The aqueous amino resin composition as claimed in
claim 1, wherein the amino resins **A** are water-
soluble melamine resins, urea resins or melamine-
urea cocondensates which are etherified with C₁ to
C₄ alcohols.

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3. The aqueous amino resin composition as claimed in claim 1, wherein the amino resins **A** are methanol-etherified melamine resins or melamine/urea resins having an amount-of-substance ratio (molar ratio) of melamine to urea to formaldehyde to methanol of 1 mol: (0 to 2 mol):(1.8 to 5.8 mol):(0.8 to 5.5 mol).
4. The aqueous amino resin composition as claimed in claim 1, wherein the ratio of the mass of component **B** to the mass of the amino resin **A** in the mixture is from 1 to 30:100.
5. The aqueous amino resin composition as claimed in claim 1, wherein the formaldehyde-binding auxiliaries **B** are selected from mixtures **B1** of organic amides **B11** having up to 10 carbon atoms and from one to four nitrogen atoms, attached in amidelike or imidelike manner, and polyhydroxyl compounds **B12** selected from aliphatic linear and branched compounds **B121** having from 2 to 6 hydroxyl groups and 1 to 10 carbon atoms, monosaccharides **B122** having up to 6 carbon atoms, and disaccharides **B123** having up to 12 carbon atoms, and, if desired, water-soluble or water-dispersible, hydroxyl-containing urethane compounds **B13**.
6. The aqueous amino resin composition as claimed in claim 1 or 5, wherein urethane compounds **B13** are of low molecular mass, having an above-average molar mass M_n of from 150 to 5000 g/mol, and contain hydrophilic groups.
7. The aqueous amino resin composition as claimed in claim 1, wherein formaldehyde-binding auxiliaries **B** used comprise the components **B2**, which are

- obtainable by reacting polyhydroxyl compounds **B21**
selected from aliphatic linear and branched
compounds **B121** having from 2 to 6 hydroxyl groups
and 1 to 10 carbon atoms, monosaccharides **B122**
5 having up to 6 carbon atoms, and disaccharides **B123**
having up to 12 carbon atoms, and also aliphatic
aliphatic polyhydroxy amines **B211** having from 2 to
6 hydroxyl groups and 1 to 4 nitrogen atoms,
attached in an aminelike manner, per molecule, and
10 containing no free amine-type hydrogen atoms, with
monofunctional or polyfunctional aliphatic,
cycloaliphatic or aromatic isocyanates **B22**.
8. The aqueous amino resin composition as claimed in
15 claim 1, wherein the acrylic resins **C** are aqueous
dispersions of an acrylic copolymer in water, the
parent monomer mixture containing more than 50% of
its mass of acrylic monomers selected from acrylic
acid and methacrylic acid, their esters with
20 aliphatic alcohols having 1 to 10 carbon atoms,
their esters with aliphatic polyhydroxy compounds
having 2 to 10 carbon atoms and at least two
hydroxyl groups per molecule, and the nitriles of
said acids.
9. The aqueous amino resin composition as claimed in
25 claim 8, wherein the ratio of the mass of the
acrylic copolymer to the mass of the amino resin in
the mixture is from 0 to 150:100.
10. The use of the aqueous amino resin composition as
30 claimed in claim 1 for impregnating paper or
cardboard for use as finished foils or edgings.
11. A finished foil or edging comprising cardboard or
35 paper impregnated with the aqueous amino resin
composition as claimed in claim 1.

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12. The finished foil or edging as claimed in claim 11,
wherein the mass per unit area of the paper or
cardboard following impregnation and subsequent
drying is greater by a factor of from 1.3 to 2.5
than that of the substrate that is used.

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